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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,582	12/22/2003	Van D. Merkle	534422-002	7978

			EXAMINER
27805	7590	06/07/2006	BROWN JR, NATHAN H

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ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	10/743,582	MERKLE, VAN D.
Office Action Summary	Examiner	Art Unit	
	Nathan H. Brown, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _(3)_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _22 December 2003_.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,14,27 and 32_ is/are rejected.

7) ☒ Claim(s) _2-13,15-26,28-31,33-36_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _22 December 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Examiner's Detailed Office Action

1. This Office is responsive to application 10/743,582, filed December 22, 2003.

2. Claims 1-36 have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

4. Claims 1, 14, 27, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Anderson et al. (USPN 6,267,722 B1) in view of *Hatzilygeroudis et al.,* "XBONE: A Hybrid

Expert System Supporting Diagnosis of Bone Diseases", and, further, in view of *Hatzilygeroudis*

et al.(2), "An Intelligent Medical System for Diagnosis of Bone Diseases".

Regarding claims 1 and 14. *Anderson et al.* teach a method for generating a medical diagnosis

(*see* Abstract) comprising the steps of:

creating a conversion table and storing said table in a computerized storage media of a

computerized system, wherein said conversion table converts medical test data into numeric

analyte values (*see* col. 23, lines 10-14 and col. 23, lines 50-55, *Examiner interprets the n x m*

array as a table of raw reflectance data for conversion. Examiner interprets the raw reflectance

data as medical test data.);

inputting at least one (two, for claim 14) test result of a patient in said computerized system (*see*

col. 15, lines 8-18, *Examiner interprets a "reflectance measurement" to be one test result and*

"reading" as inputting the data in said computerized system.);

converting said test result to at least two (one, for claim 14) numeric analyte values by said

conversion table (*see* col. 3, lines 26-31, *Examiner interprets "a positive or negative result" and*

"a quantitative determination of the concentration of analyte in the sample" to be two numeric

*analyte values (the former in the set {0,1} and the later in set of reals, **R**.) generated by*

processing results from the reflectance conversion using the conversion table (see SUMMARY

OF THE INVENTION).);

Anderson et al. do not teach:

creating a sub-diagnosis database and storing said sub-diagnosis database in said storage media,

said sub-diagnosis database including a plurality of rules, each rule of said plurality of rules

being identified by at least one diagnosis parameter; and

searching said rules in said sub-diagnosis database for at least one target rule having at least one

of said diagnosis parameters corresponding to at least one of said numeric analyte values; and

saving said target rules identified in said searching step.

However, *Hatzilygeroudis et al.* do teach:

creating a sub-diagnosis database (*see* p. 2, §3. System Architecture, *"Patients DataBase* (PDB)

contains the demographic data...", *Examiner interprets demographic data to be sub-diagnostic*

data.), said sub-diagnosis database including a plurality of rules (*see* p. 3, "Demographic patient

data are transferred to WDB from PDB.", *Examiner interprets the HKB/WDB (see Fig. 1) after*

the PDB transfer to comprise a sub-diagnosis database including a plurality of rules.), each rule

of said plurality of rules being identified by at least one diagnosis parameter (*see* p. 4, Fig. 3,

Examiner interprets the neurule, R2, to be identified by pain and fever which are diagnosis

parameters whose values are learning from known patient cases and/or the diagnostic tree (see

p. 4, §4.3 Training neurules).);

searching said rules in said sub-diagnosis database for at least one target rule having at least one

of said diagnosis parameters corresponding to at least one of said numeric analyte values (*see* p.

5, §4.4 The Hybrid Inference Process, *Examiner provides Official Notice that "backward*

chaining" is a form of searching rules. Examiner interprets the production,

"<condition>::=<object><l-operator><value>[(<significance-factor>)]" to correspond to

numeric analyte values where object maps to an analyte and the l-operator maps to the analyte

value.); and saving said target rules identified in said searching step (*see* p. 4, §4.3 Training

neurules, "Training of the neurules takes place in a period prior to the initial use of the system

and every time the system is updated.", *Examiner interprets "the system is updated" to comprise*

saving the modified parts of the system (e.g., the newly trained neurules).).

Hatzilygeroudis et al. do not teach storing said sub-diagnosis database in said storage media.

However, *Hatzilygeroudis et al.(2)* do teach storing said sub-diagnosis database in said storage

media (*see* §5. Conclusions, "It is currently implemented in the C language on a PC.", *Examiner*

interprets "implemented ... on a PC" to mean the XBONE executable and said sub-diagnosis

database are stored on the PC's hard disk drive when the PC is powered off.).

It would have been obvious at the time the invention was made to persons having ordinary skill

in the art to combine *Anderson et al.* with *Hatzilygeroudis et al.* and *Hatzilygeroudis et al.(2)* to

provide rule training from known patient cases and/or the diagnostic tree.

Regarding claims 27 and 32. *Anderson et al.* teach a system for medical diagnosis (*see* Abstract)

comprising:

a computerized system having a computerized storage media and a computerized

processor (*see* col. 2, lines 22-38, Examiner interprets "remote computer" to have a

computerized storage media and a computerized processor.);

an input device workably interconnected with said computerized system to allow a user to input

test results to said computerized system (*see* col. 2, lines 21-26, *Examiner interprets "test data"*

to be test results.);

a conversion table stored in said storage media (*see* col. 23, lines 10-14 and col. 23, lines 50-55,

Examiner interprets the n x m array as a table of raw reflectance data for conversion. Examiner

interprets the raw reflectance data as medical test data.) for converting at least one (two, for

claim 32) test result input by said user into at least two (one, for claim 32) numeric analyte

values (*see* col. 3, lines 26-31, *Examiner interprets "a positive or negative result" and "a*

quantitative determination of the concentration of analyte in the sample" to be two numeric

*analyte values (the former in the set {0,1} and the later in set of reals, **R**.) generated by*

processing results from the reflectance conversion using the conversion table (see SUMMARY

OF THE INVENTION).);

Anderson et al. do not teach a sub-diagnosis database stored in said storage media, said sub-

diagnosis database including a plurality of rules, each rule of said plurality of rules being

identified by at least one diagnosis parameter, wherein said system searches said rules in said

sub-diagnosis database and saves at least one target rule having at least one of said diagnosis

parameters corresponding to at least one of said analyte values.

However, *Hatzilygeroudis et al.* do teach a sub-diagnosis database (*see* p. 2, §3. System

Architecture, *"Patients DataBase* (PDB) contains the demographic data...", *Examiner interprets*

demographic data to be sub-diagnostic data, said sub-diagnosis database including a plurality of

rules (*see* p. 3, "Demographic patient data are transferred to WDB from PDB.", *Examiner*

interprets the HKB/WDB (see Fig. 1) after the PDB transfer to comprise a sub-diagnosis

database including a plurality of rules.), each rule of said plurality of rules being identified by at

least one diagnosis parameter (*see* p. 4, Fig. 3, *Examiner interprets the neurule, R2, to be*

identified by pain and fever which are diagnosis parameters whose values are learning from

known patient cases and/or the diagnostic tree (see p. 4, §4.3 Training neurules).), wherein said

system searches said rules in said sub-diagnosis database and saves at least one target rule having

at least one of said diagnosis parameters corresponding to at least one of said analyte values (*see*

p. 5, §4.4 The Hybrid Inference Process, *Examiner provides Official Notice that "backward*

chaining" is a form of searching rules. Examiner interprets the production,

"<condition>::=<object><l-operator><value>[(<significance-factor>)]" to correspond to

numeric analyte values where object maps to an analyte and the l-operator maps to the analyte

value.)

Hatzilygeroudis et al. do not teach said sub-diagnosis database stored in said storage media.

However, *Hatzilygeroudis et al.(2)* do teach said sub-diagnosis database stored in said storage

media (*see* §5. Conclusions, "It is currently implemented in the C language on a PC.", *Examiner*

interprets "implemented ... on a PC" to mean the XBONE executable and said sub-diagnosis

database are stored on the PC's hard disk drive when the PC is powered off.).

It would have been obvious at the time the invention was made to persons having ordinary skill

in the art to combine *Anderson et al.* with *Hatzilygeroudis et al.* and *Hatzilygeroudis et al.(2)* to

provide rule training from known patient cases and/or the diagnostic tree.

Allowable Subject Matter

5. Claims 2-13, 15-26, 28-31, and 33-36 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571- 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217- 9197 (toll-free).

Art Unit: 2121

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Nathan H. Brown, Jr.
May 25, 2006